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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,286

04/02/2007

Sung Wan Park

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

SHIBRU, HELEN

ART UNIT

PAPER NUMBER

2621

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/581,286	Applicant(s) PARK, SUNG WAN	
	Examiner HELEN SHIBRU	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/12/07, 06/01/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-11 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hanamura (US PG PUB 2001/0033619 A1).

Regarding claim 1, Hanamura teaches a method for transcoding an audio/video (A/V) stream, the method comprising: dividing a compressed digital A/V stream into audio and video data (see demultiplexer 610 in figure 1 where the prior art shows the

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audio, the video, and the other data are demultiplexed); transcoding the divided video data (see unit 640 where the video data is only transcoded after demultiplexing the inputted transport stream); synchronizing the divided audio data with the transcoded video data (see paragraphs 0280, 0314, 0325, and figure 9 where the prior art teaches the non reduction Ts packet is an audio data and the transcoded video data is synchronized with the non reduction TS packet); and packetizing the synchronized audio and video data into a digital A/V stream (see figure 1 where it shows, MPEG-2 TS multiplexer 620, the audio and the transcoded video multiplexed and MPEG-2 transport stream is outputted, see also figure 6 and paragraph 0330).

Regarding claim 2, Hanamura teaches the transcoding comprises reducing a bit rate of the video data (see figure 5, paragraphs 245, 255 and 280 where the prior art teaches the output bit rate is reduced, see also figure 6 where the prior art shows the video data goes to the process of transcoding where the bit rate of the video data is reduced).

Note to the Applicant: The USPTO considers the Applicant's "or" and "at least one" language to be anticipated by any reference containing one of the subsequent corresponding elements.

Regarding claim 3, Hanamura teaches the bit rate of the video data is reduced by reducing a frame size and a frame rate of the video data (see paragraphs 0265 and 0312, the size and the rate of the video data are reduced).

Regarding claim 4, Hanamura teaches the digital A/V stream is compressed based on an MPEG standard (see figure 1 where the prior art shows MPEG-2 TS is inputted and outputted).

Regarding claim 5, Hanamura discloses the divided audio data is synchronized with the transcoded video data by matching Presentation Time Stamps (PTSs) of the audio and video data (see paragraphs 0244, 0320, and 0325 audio and video are synchronized by matching the value of audio and video PTSs). Regarding claim 6, Hanamura discloses original PTSs of video data before the video data is transcoded are used for the transcoded video data (see paragraphs 0325 and 0329, the PTS located at the header of the inputted video stream is used for the transcoded data).

Regarding claim 7, Hanamura discloses new PTSs are used for the transcoded video data (see paragraph 0244, PTS corresponding to the transcoded video is generated), and PTSs of the audio data are updated based on the new PTSs (see paragraphs 0430 and 0440, new audio PTS is calculated) .

Regarding claim 8, Hanamura teaches a start PTS value of the PTSs of the audio data is replaced with a start PTS value of the new PTSs of the transcoded video data, and the other PTS values of the PTSs of the audio data are updated based on the difference between the start PTS value of the new PTSs of the transcoded video data and the start PTS value of the PTSs of the audio data (see paragraphs 0244 and 0235, the audio data is synchronized with the transcoded video data where the synchronization is performed using the presentation time stamp where the time stamp

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has a start and end values, i.e. the audio start value at the output is same as the video start value, and the non-reduction data (audio data) PTS value is adjusted to match with the transcoded video in order to synchronize and multiplex the data, see also paragraphs 0325 and 0439).

Regarding claim 9, Hanamura discloses the transcoding and the synchronizing are performed on a section-by-section basis, each section having continuous PTS values (see figure 116, paragraphs 0434, 0441, and 0447 where the prior art teaches number of frames are transcoded in section with PTS values assigned to each).

Regarding claim 10, Hanamura discloses temporarily storing the divided audio data before synchronizing the divided audio data with the transcoded video data. (see the non reduction buffer 230 in figure 6 and paragraphs 0285 and 0314).

Regarding claim 11, Hanamura discloses the size of a buffer for temporarily storing the audio data is determined based on both a time required to transcode the video data and a bit rate of the audio data (see paragraphs 0408, 0418, and 0420 where the prior art teaches the measuring the volume of the audio buffer is measured by transcoding time and the rate of the audio data).

Regarding claim 13, Hanamura discloses transmitting the packetized digital A/V stream (see paragraph 0279 and last three lines of claim 14, the output packets are transmitted through transmitting path).

Regarding claim 14, Hanamura teaches the compressed digital A/V stream is received via digital broadcast (see paragraph 0268).

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Regarding claim 15, Hanamura discloses an apparatus for transcoding a digital audio/video (A/V) stream, the apparatus comprising: a demultiplexer for dividing a compressed digital A/V stream into audio and video data (see demultiplexer 210 in figure 6 where the prior art shows the non-reduction buffer (audio), and the video are demultiplexed); a buffer for temporarily storing the divided audio data (see non reduction buffer 230 in figure 6); a transcoder for transcoding the divided video data (see video ES transcoder 244 in figure 6); a synchronizer for synchronizing the divided audio data with the transcoded video data see paragraphs 0280, 0314, 0325, and figure 9 where the prior art teaches the non reduction Ts packet is an audio data and the transcoded video data is synchronized with the non reduction TS packet); and a packetizer for packetizing the synchronized audio and video data into a digital A/V stream (see paragraphs 0330 and figure 6, MPEG-2 TS multiplexer 220, the audio and the transcoded video multiplexed and MPEG-2 TS is outputted).

Regarding claim 16, the limitation of claim 16 can be found in claims 2 and 3 above. Therefore claim 16 is analyzed and rejected for the same reasons as discussed in claims 2 and 3.

Regarding claim 17, Hanamura discloses original PTSs of the video data before the video data is transcoded are used for the transcoded video data to synchronize the divided audio data with the transcoded video data (see paragraphs 0325 and 0329, the inputted PTS values are used to synchronize and the reduced data and the non reduced data).

Regarding claim 18, the limitation of claim 18 can be found in claims 7 and 9 above. Therefore claim 18 is analyzed and rejected for the same reasons as discussed in claims 7 and 9.

Claims 19 and 20 are rejected for the same reasons as discussed in claims 8 and 11 respectively above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamura in view of Official Notice.

Regarding claim 12, although Hanamura discloses a storage medium having transcoding coding, Hanamura fails to disclose recording the outputted packetized digital A/V stream to a recording medium. Official Notice is taken that it is notoriously well known to connect the Hanamura's multiplexer, 620, to a digital recording device to record the lowered bit rate stream in to a recording medium. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hanamura by adding a recording device to record the digital stream in to the digital recording medium in order to produce the digital stream multiple times.

Regarding claim 21, the limitation of claim 21 can be found in claims 12 and 14. Therefore claim 21 is analyzed and rejected for the same reason as discussed in claims 12 and 14 above.

Regarding claim 22, although Hanamura discloses transmitting the packetized digital A/V stream, Hanamura fails to specifically teach transmitting the stream of data to a client computer through a communication network. Official Notice is taken that it is notoriously well known in the data transmitting and receiving art to transmit packetized transport stream to a client computer using communication network. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hanamura by transmitting the packetized stream to a computer via a network in order to create a more cost-effective interactive video system that eliminates location constraints.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jacobs et al. (US PG PUB 2006/0048193 a1) teaches separating audio and video and transcoding video frames.

Vasudevan et al. (US PG PUB 2002/0131496) transmitting stream of data in desired bit rate.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571)272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN SHIBRU/
Examiner, Art Unit 2621

/ROBERT CHEVALIER/
Primary Examiner, Art Unit 2621
April 11, 2009.